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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/696,008

10/29/2003

Mark-Matthias Bakran

BAKRAN

7101

20151 7590 08/27/2004

HENRY M FEIEREISEN, LLC
350 FIFTH AVENUE
SUITE 4714
NEW YORK, NY 10118

EXAMINER

STERRETT, JEFFREY L

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/696,008	Applicant(s) BAKRAN ET AL.	
	Examiner Jeffrey L. Sterrett	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Teichmann (US 6,205,040).

Teichmann discloses a n-point converter circuit (figures 4 and 5) comprising two series connected converter valves (S1/S2 and S3/S4) having (n-1) turn-off semiconductor switches (T1/T2 and T3/T4, respectively) for each converter phase connected in series at corresponding converter valve connection points (10), a voltage intermediate circuit having (n-1) capacitors (Cdc1/Cdc2 and Cdc3/ Cdc4) connected in series at (n-2) corresponding capacitor connection points (0), and (n-2) cross arms (Saux3) having (n-1) anti-serial connected turn-off semiconductor switches wherein the free ends of the converter valves and capacitors form DC terminals (+/2 and -/4) and the (n-2) cross arms are connected between a valve connection point (10) that serves as a load terminal and a capacitor connection point (0) as recited by claims 1 and 6.

3. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teichmann in view of Mizukoshi (US 6,005,787).

Teichmann teaches a n-point converter circuit as recited by claims 2 and 7 except for arranging the turn-off semiconductor switches of the converter valves and the cross arms side-by-side. Mizukoshi teaches as old and known in the art at the time of the invention utilizing arranging the turn-off semiconductor switches (11a, 12a, 13a, 14a, 15a, 16a, 17a, and 18a) of the converter valves and the cross arms of a n-point converter circuit side-by-side as shown in figures 1 and 6. It would have been obvious

Art Unit: 2838

to one of ordinary skill in the art at the time of the invention to have modified the n-point converter circuit of Teichmann by arranging the turn-off semiconductor switches of the converter valves and the cross arms side-by-side as taught by Mizukoshi in order to simply the layout of the assembly of the turn-off semiconductor switches.

4. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teichmann in view of Yuan et al (reference cited on IDS).

Teichmann teaches a n-point converter circuit as recited by claims 5 and 8 except for utilizing IGBT's as the turn-off semiconductor switches. Yuan et al teaches as old and known in the art at the time of the invention a n-point converter circuit utilizing IGBT's as the turn-off semiconductor switches. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the n-point converter circuit of Teichmann by utilizing IGBT's as the turn-off semiconductor switches in order to benefit from the known advantages and characteristics of IGBT's as taught by Yuan et al.

5. Applicant's arguments filed August 23, 2004 have been fully considered but they are not persuasive.

In response to applicant's remarks concerning the disclosure of Teichmann, as explained in the past office action and repeated above Teichmann discloses a n-point converter circuit as broadly and generically set forth by the claims. Although the circuitry element count of Teichmann may be higher than that of applicant as noted by applicant, no claim language currently limits the upper number of circuitry elements in the recited n-point converter circuit. As long as the n-point converter circuit of Teichmann

Art Unit: 2838

comprises at least the recited circuitry elements, there is no prohibition that the n-point converter circuit of Teichmann cannot contain additional circuitry elements. Additionally it is noted that often Teichmann simply utilizes multiple circuitry elements effectively as one circuitry element where applicant utilizes only one circuitry element as also noted above. For example in figure 1 of the present application applicant utilizes a single capacitor between terminals P and MP whereas in figures 4 and 5 Teichmann utilizes two capacitors Cdc1 and Cdc2 between the positive terminal 2 and neutral terminal 0 that effectively acts as a single capacitance between the positive terminal 2 and neutral terminal 0.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

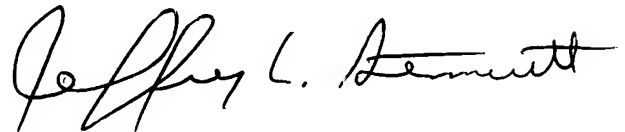
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Sterrett whose telephone number is (571)

Art Unit: 2838

272-2085. The examiner can normally be reached on Monday-Thursday & 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey L. Sterrett
Primary Examiner
Art Unit 2838